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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/043,976

01/11/2002

Neil Doherty

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06/01/2004

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EXAMINER

CRENSHAW, MARVIN P

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,976

Applicant(s)

DOHERTY ET AL.

Examiner

Marvin P. Crenshaw

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed 1/30/2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 16 and 18 - 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 16 and 18 - 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 6, 10, 13 - 16 and 18 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms et al. in view of Keiser et al.

Helms et al. teaches a roll for a web printing press (Fig. 2) comprising a cylindrical drum (Fig. 6) and the drum defining a coolant inlet (84) and a coolant outlet (86) for circulating a coolant through an interior space in the drum, the interior space being separate from the pathway for the air. However, Helms et al. doesn't teach a porous layer disposed at a circumference of the drum and configured to provide a pathway for air from a first location between the roll and a web passing over the chill roll and a second location having a lower air pressure.

Keiser et al. teaches a porous layer (See paragraph (0037)) disposed at a circumference of the drum and configured to provide a pathway for air from a first location (air coming in through the end of the roll) between the roll and a web (30) passing over the chill roll and a second location (the opposite side of the chill roll) having a lower air pressure.

It would have been obvious to modify Helms et al. to have the porous layer disposed at the circumference of the drum and a web passing over the chill roll as taught by Keiser

et al. to provide an efficient way of cooling the roller while transporting a paper medium during printing for keeping the ink from smearing.

With respect to claim 2, 3, 4, 10 and 21, Helms, doesn't teach a porous layer being attached to a circumferential surface of the drum.

Keiser et al. teaches a porous layer is attached to a circumferential surface of the drum, a porous layer is integral with a circumferential surface of the drum, a porous layer forms a circumferential surface of the drum (See paragraph (0037)), and a porous layer (Fig. 2) defines at least one of a hole, a slot and a tube so as to provide the pathway.

With respect to claim 5, Helms et al. teaches a pathway is configured to enable the air to move in a radial (Fig. 11) direction.

With respect to claim 6, Helms et al. teaches a pathway (3) is further configured to enable the air to move in at least one of a lateral and circumferential direction.

With respect to claim 13, Helms et al. as modified by Keiser et al., Keiser doesn't teach a porous layer has a thickness of from about 1 mm to about 2.5 mm but it would be obvious to one of ordinary skill in the art through optimum choice to have the thickness between 1 mm and 2.5 mm to have an efficient means for the pathway of air to travel between the web and the drum.

With respect to claim 14, Helms et al. teaches a second location (Fig. 11) is at a lateral edge of the drum.

With respect to claim 15, Helms et al. teaches an air is entrained at the first location (Fig. 11).

With respect to claim 16, Helms et al. teaches a pathway (3) is configured to enable the air to move from the first location so as to improve a heat transfer between the web and chill roll.

With respect to claim 18, Helms et al. teaches a printing press comprising a cylindrical roll (Fig. 11) including a porous layer (11) disposed at a circumference of the roll and configured to provide a pathway for air from a first location between the chill roll and a web passing over the chill roll and a second location having a lower air pressure.

However, Helms et al. doesn't teach the chill roll having a circuit for circulating coolant and the circuit being separate from the pathway of air. Keiser et al. teaches a chill roll (Fig. 7) having a circuit (84 and 86) for circulating coolant and the circuit being separate from the pathway of air. It would have been obvious to modify Wirz to have a chill roll for circulating coolant and the circuit being separate from the pathway of air as taught by Helms et al. to provide an efficient way of cooling the roller while transporting a paper medium during printing for keeping the ink from smearing.

With respect to claim 19, Helms et al. teaches a pathway (Fig. 2, the pathway is between the peaks) is configured to enable the air to move from the first location so as to improve a heat transfer between the web and the roll.

With respect to claim 20, Helms et al. teaches a pathway (Fig. 2, the pathway is between the peaks) is configured to enable the air move in a radial direction (Fig. 5) and in at least one of a lateral and a circumferential direction.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms et al. in view of Keiser et al. and further in view of McCartney et al.

Helms et al. and Keiser et al. together teach all that is claimed, as discussed in claims 1-7, 10 – 16 and 18-20 above, except the porous layer is a fibrous and or foam material. McCartney et al. teaches the use of a porous layer including a fibrous and foamed material (See col. 6, lines 4-17). It would have been obvious to further modify the roll of Helms et al. to have a porous layer being fibrous and made of a foam material as taught by McCartney et al. so as to reduce the mechanical shocks when transporting the medium.

Claims 7,11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms et al. in view of Keiser et al. as applied to claims 1 – 6, 10, 13 - 16 and 18 – 22 above, and further in view of Fujiki.

Helms et al. as modified by Keiser et al. teach all that is claimed in the above rejection except a porous layer includes a matrix material and made of at least one of steel, aluminum and copper.

Fujiki teaches a porous layer including a matrix material and made of at least one of steel, aluminum and copper (See col. 4, lines 35 – 47).

With respect to claim 11, Fujiki doesn't teach a porous layer including a material having a high thermal conductivity but it would be obvious to one of ordinary skill in the art that steel, aluminum or copper once friction is applied to them will produce a thermal heat.

Response to Arguments

Applicant's arguments with respect to claims 1 – 16 and 18 – 22 have been considered but are moot in view of the new ground(s) of rejection. Specifically, Hems teaches the claimed invention of having a cylindrical drum and the drum defining a

coolant circulation means having a coolant inlet and outlet. Also, Keiser et al. has been added to teach the porous layer covering the cylindrical drum. Also Fujiki has been added to teach a porous layer of matrix material and made of metal.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marvin P. Crenshaw whose telephone number is (571) 272-2158. The examiner can normally be reached on Monday - Thursday 7:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MPC
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